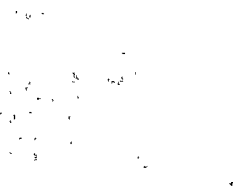


APPENDIX I

SURVEILLANCE SYSTEM REQUIREMENTS

DATA DICTIONARY



REQUIREMENTS MODEL DATA DICTIONARY

This Data Dictionary contains the definition and references of all data items in the Data Flow Diagrams that describe the system functional requirements. The bold words indicate the beginning of a name for an entry in the data dictionary. An entry is categorized as either a PROCESS, FLOW, EXTERNAL, or STORE. PROCESS names begin with a verb while the other names do not.

The COMPOSITION field is primarily used for data FLOWS. The COMPOSITION field is used to define other data FLOWS that may constitute the particular FLOW.

The DEFINITION field is a text field used for further clarification of the particular data dictionary entry. This field is typically omitted unless there is any ambiguity.

The REFERENCES field primarily is used to show where the particular data dictionary can be found in the analysis model. It also explicitly defines whether the entry is a PROCESS, FLOW, EXTERNAL, or STORE. The last item in quotes on each line gives the name of the location within the analysis. Note: a particular PROCESS, FLOW, EXTERNAL, or STORE can be found in multiple places in the model.

Acquire Data from Reported Site

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Confirm Traffic Incident"

Acquire Incident Assessment Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Traffic Condit"

Acquired Law Enforcement Parameters

COMPOSITION: Acquired Vehicle Dimension + Acquired Vehicle Emissions + Acquired Vehicle Occupancy + Acquired Vehicle Speed + Acquired Vehicle Weight + Acquired Veh Safety Status + Acquired Vehicle ID

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Acquired Parking Vehicle Data

COMPOSITION: Acquired Vehicle Travel Direction + Acquired Vehicle Occupancy + Vehicle Comms Messages + Acquired Vehicle ID

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Acquired Traffic-Related Vehicle Data

COMPOSITION: Acquired Vehicle Dimension + Vehicle Location and Tracking Data + Vehicle Comms Messages

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Acquired Vehicle Dimension

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Acquired Vehicle Emissions

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Acquired Vehicle ID

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Parking Facili"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Acquired Vehicle Occupancy

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Formulate Application"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Parking Facili"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Acquired Vehicle Speed

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Acquired Vehicle Travel Direction

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRTDFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Parking Facili"

Acquired Vehicle Weight

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Acquired Veh Safety Status

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Acquire Incident/Congestion Reports

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Traffic Data"

Acquire Incident Severity Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Assess Incident Severi"

Acquire Individual Vehicle Information

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Surveillance System"

Acquire Signal Priority Requests

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Traffic Data"

Acquire Traffic Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Traffic Condit"

Air Pollution

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Environmental"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Air Quality Assessment Inputs

COMPOSITION:

DEFINITION: This assessment is based on the monitored weather data as well as the actual measurements of the air pollution.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Environmental"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Animal Detection Data

COMPOSITION:

DEFINITION: This includes the time, location, and frequency of the animals detected.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Animals in ROW

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Assess Traffic Performance

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Traffic Condit"

Atmospheric and Travel Surrounding

COMPOSITION: Air Pollution + Weather Conditions + Transfer Points Environment + Transit Vehicle Environment + Parking Facility Environment

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

Classify Vehicle

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Traffic Data"

Compute Link Travel Time and Speed

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Assess Traffic Perform"

Compute Traffic Delay

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Assess Traffic Perform"

Confirm Incident/Congestion Presence

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Confirm Traffic Incident"

Confirm Traffic Incident and Congestion

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Traffic Condit"

Confirmed Incident/Congestion Events

COMPOSITION:

DEFINITION: Data includes Confirmed incident/congestion location and time of occurrence.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Assess Traffic Perform"

ANALYSIS (FLOW) "SRT.DFD" "Confirm Traffic Incident"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Assess Incident Severi"

Confirmed Incident Location

COMPOSITION:

DEFINITION: An element of "Traffic Incident Data."

REFERENCES

Correlate Detection Events

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Detect Traffic Incident"

Corridor Surveillance System

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Context"

Cross Wind Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Debris Detection Data

COMPOSITION:

DEFINITION: This includes the time, location, size, and type of debris.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Debris on Roads

COMPOSITION:

DEFINITION:

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Declared Incident/Congestion Detection

COMPOSITION:

DEFINITION: The detected Incident / Congestion is classified as declared only when there is positive correlation between the Incident / Congestion Data Report and the Estimated Incident / Congestion Location. The correlation is based on parameters such as time of occurrence, location, etc.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Detect Traffic Incident"

Designated Route Violation Data Report

COMPOSITION: Acquired Vehicle Dimension + Acquired Vehicle Weight + Acquired Vehicle Travel Direction + Acquired Vehicle ID + Acquired Vehicle Location

DEFINITION: This data is used to determine if a vehicle has violated any designated route traffic laws.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Detect Animal Entering Roadway

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

Detect Debris on Road

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Road Condition"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

Detect Hazardous Cross Wind Conditions

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

Detect Parking Facility Security Events

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Travel Securit"

Detect Pavement / Bridge Damage

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Road Condition"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

Detect Slippery Road Conditions

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

Detect Traffic Incident and Congestion

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Traffic Condit"

Detect Transfer Points Security Events

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Transportatio"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Travel Securit"

Detect Transit Vehicle Security Events

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Transportation

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Travel Securit"

Determine Designated Route Violation

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Transportatio"

Determine Detection Confidence Level

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Detect Traffic Inciden"

Determine Height And Width Violation

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Transportatio"

Determine HOV Occupancy Violation

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Transportatio"

Determine Parking Entries and Exits

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Parking Facili"

Determine Parking Usage

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor intermodal Par"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Parking Facili"

Determine Queue Length

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Assess Traffic Perform"

Determine Speed Violation

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Transportatio"

Determine Traffic Density

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Traffic Data"

Determine Traffic Headway

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Traffic Data"

Determine Traffic Speed

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Traffic Data"

Determine Traffic Volume

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Traffic Data"

Determine Unsafe Vehicle Status

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Transportatio"

Determine Vehicle Emissions

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Individual Veh"

Determine Vehicle Emissions Violation

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Transpottatio"

Determine Vehicle Identification

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Individual Veh"

Determine Vehicle Location

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Individual Veh"

Determine Vehicle Occupancy

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Individual Veh"

Determine Vehicle Safety

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Individual Veh"

Determine Vehicle Speed and Direction

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Individual Veh"

Determine Vehicle Weight and Dimension

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Individual Veh"

Determine Weight Violation

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Transportatio"

Driver

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Driver Report

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Context"

Emerg Response Veh Loc and Tracking Data

COMPOSITION:

DEFINITION: An element of the "Vehicle Location and Tracking Data."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

Emission Violation Data Report

COMPOSITION: Acquired Vehicle Emissions + Acquired Vehicle Travel Direction + Acquired Vehicle ID + Acquired Vehicle Location

DEFINITION: This data is used to determine if a vehicle has violated any emissions laws.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Estimated Incident/Congestion Location

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Detect Traffic Inciden"

Estimate Incident/Congestion Location

COMPOSITION:

DEFINITION: This is the computed or estimate location of an incident based on surveillance collected traffic flow data.

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Detect Traffic Inciden"

External Data

COMPOSITION: External Traffic Data + Map Data + Facilities Data + Tracked Vehicle Identification Inputs + Route Data

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

External Services Support Systems

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

External Traffic Data

COMPOSITION:

DEFINITION: This is traffic data received from other external entities, not from the surveillance system, such as corridors non member agencies and private service providers. Data could include traffic speed, volume, density, etc. and would augment the surveillance collected traffic data.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Context"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Facility Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

Formulate Air Quality Assessment Data

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Environmental"

Formulate Parking Charge Inputs

COMPOSITION:

DEFINITION: Formulate parking data reflecting TDM criteria such as vehicle occupancy and time of use.

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Intermodal Par"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Parking Facili"

Formulate Planning Inputs

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Formulate Application"

Formulate Snow Ice Prediction Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Environmental"

Formulate Traffic Incident Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Assess incident Severi"

Fuse Traffic Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Traffic Data"

Generate Road Hazard Detection Report

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

Hazard Control Needs information

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Assess Incident Severi"

HAZMAT Carrier Location and Track Data

COMPOSITION:

DEFINITION: An element of the "Vehicle Location and Tracking Data."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

Headway

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

High Pollution Area Data Report

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Environmental"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

HOV Violation Data Report

COMPOSITION: Acquired Vehicle Travel Direction + Acquired Vehicle ID + Acquired Vehicle Occupancy + Acquired Vehicle Location

DEFINITION: This data is used to determine if a vehicle has violated any occupancy laws.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Identify High Pollution Area

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Environmental"

Identify Low Visibility Conditions

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

Incident/Congestion Data Report

COMPOSITION:

DEFINITION: This Report shall supply the collected incident related data such as a report from a driver or a message generated by a vehicle (e.g. Mayday call)

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Detect Traffic Incident"

Incident/Congestion Confirmation Request

COMPOSITION: Incident or Congestion Location + Incident or Congestion Occurrence Time

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Detect Traffic Incident"

ANALYSIS (FLOW) "SRT.DFD" "Confirm Traffic Incident"

Incident/Congestion Site Data

COMPOSITION:

DEFINITION: This includes data (e.g., location, time) specific to the incident / congestion under investigation which is used for Confirmation.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Confirm Traffic Incident"

Incident Management Inputs

COMPOSITION: Traffic Flow Data + Traffic Performance Data + Traffic Incident Data + Road Hazard Detection Report + Travel Security Events + Emerg Response Veh Loc and Tracking Data + Maint Veh Loc and Tracking Data + HAZMAT Carrier Location and Track Data

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

Incident Management System

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Incident Removal Needs Information

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Assess Incident Severi"

Incident Severity Data

COMPOSITION:

DEFINITION: This is the collection of incident-related data that includes time of occurrence, location of the incident, number of vehicles involved, type of damage, injuries, etc.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Assess Incident Severi"

Incident or Congestion Location

COMPOSITION:

DEFINITION: An element of "Incident/Congestion Confirmation Request"

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Detect Traffic Incident"

ANALYSIS (FLOW) "SRT.DFD" "Confirm Traffic Incident"

Incident or Congestion Occurrence lime

COMPOSITION:

DEFINITION: An element of "Incident/Congestion Confirmation Request"

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Detect Traffic Incident"

ANALYSIS (FLOW) "SRT.DFD" "Confirm Traffic Incident"

Intermodal Management Inputs

COMPOSITION: Traffic Flow Data + Traffic Performance Data + Traffic Incident Data + Vehicle Occupancy + Transit Veh Loc and Tracking Data + Parking Usage Data + Parking Charge Inputs

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

Intermodal Management System

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Lane Blockage Information

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Assess Incident Severi"

Law Enforcement System

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Link Travel Time and Speed

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Assess Traffic Perform"

Low Visibility Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Maintain Parking Database

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Maintain Support Datab"

Maintain Road Network Database

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Maintain Support Datab"

Maintain Route Database

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Maintain Support Datab"

Maintain Support Databases

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Surveillance System"

Maintain Surveillance Asset Database

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Maintain Support Datab"

Maintain Tracked Vehicle Database

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Maintain Support Datab"

Maintain Transfer Point Database

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Maintain Support Datab"

Maint Veh Loc and Tracking Data

COMPOSITION:

DEFINITION: An element of the "Vehicle Location and Tracking Data."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

Map Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

Measured Air Pollution

COMPOSITION:

DEFINITION: This includes the measured air pollution data as well as geographic information such as location.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Environmental"

Measured Pavement Temperature

COMPOSITION:

DEFINITION: This includes the temperature measurement as well as geographic information such as location.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Environmental"

Medical Assistance Needs Information

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Assess Incident Severi"

Monitored Weather Data

COMPOSITION:

DEFINITION: This includes the measured weather data as well as geographic information such as location.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Environmental"

Monitor Environmental Conditions

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Surveillance System"

Monitor Intermodal Transfer Points

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Transportatio"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Travel Securit"

Monitor Parking Facilities

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Surveillance System"

Monitor Parking Facility Security

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Travel Securit"

Monitor Pavement Temperature

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Environmental"

Monitor Public Transit Vehicle

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Transportatio"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Travel Securit"

Monitor Road Hazards

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Surveillance System"

Monitor Roadway Air Pollution

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Environmental"

Monitor Road Weather Conditions

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Environmental"

Monitor Traffic Conditions

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Surveillance System"

Monitor Transportation Law Violation

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Surveillance System"

Monitor Travel Security

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Surveillance System"

Parking Charge Inputs

COMPOSITION: Parking Entry Time + Parking Exit Time + Parking Duration + Parking User

Classification + Parking Veh Occupancy

DEFINITION: An element of "parking Monitoring Data."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Intermodal Par"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Parking Facili"

Parking Entry and Exit Counts

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Parking Facili"

Parking Facility Data

COMPOSITION:

DEFINITION: Data related to updated parking facilities (e.g., location, identification, capacity).

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

Parking Facility Environment

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Travel Securit"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Parking Facility Security Data

COMPOSITION:

DEFINITION: Data related to the security monitoring and security incident detection in parking facilities.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Travel Securit"

Parking Facility Security Events

COMPOSITION:

DEFINITION: Data related to a security event at a parking facility.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Travel Securit"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Parking Monitoring Data

COMPOSITION: Parking Usage Data + Parking Charge Inputs

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Parking Usage Data

COMPOSITION:

DEFINITION: An element of "parking Monitoring Data."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Intermodal Par"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Formulate Application"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Parking Facili"

Parking Vehicle Entry and Exit Times

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Parking Facili"

Parking Duration

DEFINITION: An element of "Parking Charge Inputs."

Parking Entry lime

DEFINITION: An element of "Parking Charge Inputs."

Parking Exit Time

DEFINITION: An element of "Parking Charge inputs."

Parking User Classification

DEFINITION: An element of "Parking Charge Inputs."

Parking Veh Occupancy

DEFINITION: An element of "Parking Charge Inputs."

Pavement / Bridge Damage Conditions

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Pavement / Bridge Damage Detection Data

COMPOSITION:

DEFINITION: This includes the time, location, size, and type of the damage.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Pavement Temperature

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Environmental"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Planning Inputs

COMPOSITION: Traffic Flow Data + Traffic Performance Data + Traffic Incident Data +
Acquired Vehicle Weight + Acquired Vehicle Occupancy + Acquired Vehicle Emissions

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

Prioritize Confirmation Requests

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Confirm Traffic Incident"

Prioritized Inc/Congest Confirm Requests

COMPOSITION:

DEFINITION: Prioritized IncidentiCongestion Confirmation Requests

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Confirm Traffic incident"

Provide Incident Hazard Control Needs Info

COMPOSITION

DEFINITION

REFERENCES ANALYSIS(PROCESS) "SRT.DFD" "AssessIncidentSeveri"

Provide Incident Removal Needs Information

COMPOSITION

DEFINITION

REFERENCES ANALYSIS(PROCESS) "SRT.DFD" "AssessIncidentSeveri"

Provide Medical Assistance Needs Information

COMPOSITION

DEFINITION

REFERENCES ANALYSIS(PROCESS) "SRT.DFD" "AssessIncidentSeveri"

Provide Traffic Blockage Information

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Assess Incident Severi"

Public Transit Security Data

COMPOSITION:

DEFINITION: Data related to the security monitoring and security incident detection on a public transit vehicle.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

ANALYSIS (FLOW) "SRTDFD" "Monitor Travel Securit"

Public Transit Security Events

COMPOSITION:

DEFINITION: Data related to a securii event on a public transit vehicle.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Travel Securit"

Queue Length and Location

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Assess Traffic Perform"

Real-World Road Hazards

COMPOSITION: Pavement Damage Conditions + Debris on Roads + Animals in ROW + Weather Effects

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Real-World Incident Parameters

COMPOSITION:

DEFINITION Real-world conditions of an incident such as the number of vehicles involved, type of damage, injuries, etc.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Assess Incident Severi"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Real-World Road Conditions

COMPOSITION: Pavement Damage Conditions + Pavement Temperature + Debris on Roads + Animals in ROW + Weather Effects

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

Real-World Traffic Conditions

COMPOSITION: Real-World Traffic Parameters + Real-World Incident Parameters

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Real-World Traffic Parameters

COMPOSITION:

DEFINITION: These are the real-world attributes of the traffic that shall be used to determine specific traffic parameters such as traffic speed, volume, density, etc.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Assess Incident Severi"

ANALYSIS (FLOW) "SRT.DFD" "Confinn Traffic Inciden"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Real-World Vehicle Attributes

COMPOSITION: Vehicle Observable Parameters + Vehicle Communications

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Received External Traffic Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

Received Signal Priority Request

COMPOSITION:

DEFINITION:

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Receive External Traffic Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Traffic Data"

Receive Road Hazard Reports

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

Receive Veh-to-Infrastructure Comms

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Acquire Individual Veh"

Road

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Road Hazard Data Report

COMPOSITION:

DEFINITION: This report contains information received from a driver report. It includes at least the time, location, and type of road hazard that is reported.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Road Hazard Detection Data Report

COMPOSITION:

DEFINITION: This report includes the hazard type, location, and the time of detection for each hazard detected.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Road Network Data

COMPOSITION:

DEFINITION: Data related to updates to the road network, such as updated road geometric and geographic information, construction areas, etc.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

Route Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Severity Assessment Result

COMPOSITION: Lane Blockage + Medical Assistance Needs + Hazard Control Needs + Incident Removal Needs

DEFINITION: An element of "Traffic Incident Data."

REFERENCES

Slippery Road Data

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Snow Ice Prediction Inputs

COMPOSITION: Measured Pavement Temperature + Monitored Weather Data

DEFINITION:

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Formulate Application"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Environmental"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Snow Removal Management System

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Snow Removal Operations Inputs

COMPOSITION: Traffic Flow Data + Traffic Performance Data + Maint Veh Loc and Tracking Data + Snow Ice Prediction Inputs

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

Speed Violation Data Report

COMPOSITION: Acquired Vehicle Speed + Acquired Vehicle Travel Direction + Acquired Vehicle ID + Acquired Vehicle Location

DEFINITION: This data is used to determine if a vehicle has violated any speed laws.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Support Database Inputs

COMPOSITION: Tracked Vehicle Identification Inputs + Route Data + Facilities Data + Map Data

DEFINITION: An Element of "External Data"

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Surveillance Asset Data

COMPOSITION:

DEFINITION: Data related to updated surveillance assets (equipment type, location and operational status).

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

TDM Inputs

COMPOSITION: Traffic Flow Data + Traffic Performance Data + Parking Usage Data + Vehicle Occupancy + Air Quality Assessment Inputs + High Pollution Area Report

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

Time of Incident Occurrence

COMPOSITION:

DEFINITION: An element of "Traffic Incident Data."

REFERENCES

TIS Inputs

COMPOSITION: Traffic Performance Data + Traffic Incident Data + Parking Usage Data + Road Hazard Detection Report

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

Tracked Vehicle ID

COMPOSITION:

DEFINITION: Identification of vehicles to be tracked, including emergency-response vehicles, transit vehicles, maintenance vehicles, and HAZMAT vehicles.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

ANALYSIS(STORE)"SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

Tracked Vehicle Identification Inputs

COMPOSITION:

DEFINITION: Inputs are to be provided by the system users (e.g., transit operators, maintenance agencies, etc.)

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

Traffic Control Inputs

COMPOSITION: Traffic Flow Data + Traffic Performance Data + Traffic Incident Data + Received Signal Priority Request + Road Hazard Detection Report

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Context"

Traffic Control System

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Traffic Delay and Location

COMPOSITION:

DEFINITION:

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Assess Traffic Perform"

Traffic Density

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

Traffic Flow Data

COMPOSITION:

DEFINITION: This includes all available and necessary data and parameters to describe the flow of traffic in the road network.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Assess Traffic Perform"

ANALYSIS(STORE)"SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Detect Traffic Inciden"

Traffic Incident Data

COMPOSITION: Confirmed Incident Location + Time of Incident Occurrence + Severity
Assessment Result

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Assess Traffic Perform"

ANALYSIS (FLOW) "SRT.DFD" "Assess Incident Sever?"

Traffic Monitoring Data

COMPOSITION: Traffic Performance Data + Traffic Flow Data + Traffic Incident Data +
Received Signal Priority Request

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Traffic Performance Data

COMPOSITION: Queue Length and Location + Traffic Delay and Location + Link Travel Time
and Speed

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Formulate Application"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (STORE) "SRT.DFD" "Assess Traffic Perform"

ANALYSIS (FLOW) "SRT.DFD" "Assess Traffic Perform"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Traffic Speed

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Traffic Stream

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

ANALYSIS (EXTERNAL) "SRT.DFD"

Traffic Volume

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

Transfer Point Facility Data

COMPOSITION:

DEFINITION: Data related to updated transfer point facilities (e.g., geographic location,
identification, and facility description).

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

Transfer Point Environment

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Travel Securit"

Transfer Point Security Data

COMPOSITION:

DEFINITION: Data related to the security monitoring and security incident detection at
intermodal transfer points.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Travel Securit"

Transfer Point Security Events

COMPOSITION:

DEFINITION: Data related to a security event at an intermodal transfer point.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Travel Securit"

Transit Route Data

COMPOSITION:

DEFINITION: Data related to updated transit routes.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

Transit Vehicle Environment

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Travel Securit"

Transit Veh Loc and Tracking Data

COMPOSITION:

DEFINITION: An element of the "Vehicle Location and Tracking Data."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

Transportation Environment

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Transportation Network Data

COMPOSITION: Road Network Data + Transfer Point Facility Data + Transit Route Data + Truck Route Data + Parking Facility Data + Surveillance Asset Data

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Assess Traffic Perform"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Location of Sel"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Environmental"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Parking Facili"

ANALYSIS (STORE) "SRT.DFD" "Maintain Support Datab"

ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Confirm Traffic Inciden"

Transportation Planning System

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Transport Law Violation Data Reports

COMPOSITION: Speed Violation Report + Vehicle Weight Violation Report + Vehicle Dimension Violation Report + Unsafe Vehicle Status Report + Emission Violation Report + HOV Violation Report + Designated Route Violation Report

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Context"

Travel Demand Management System

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Traveler Information System

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Travel Security Environment

COMPOSITION: Transfer Point Environment + Transit Vehicle Environment + Parking Facility Environment

DEFINITION: An Element of "Atmospheric and Travel Surrounding"

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Travel Security Events

COMPOSITION: Parking Facility Security Events + Public Transit Security Events + Transfer Points Security Events

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Truck Route Data

COMPOSITION:

DEFINITION: Data related to updated truck routes.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Maintain Support Datab"

Unsafe Vehicle Status Data Report

COMPOSITION: Acquired Vehicle Travel Direction + Acquired Vehicle ID + Acquired Vehicle Location + Acquired Vehicle Safety Status

DEFINITION: This data is used to determine if a vehicle has violated any safety laws.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Vehicle

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (EXTERNAL) "SRT.DFD" "Context"

Vehicle Class

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

Vehicle Comms Messages

COMPOSITION:

DEFINITION: This is a message generated by a vehicle. Examples include a Mayday message, signal priority request, vehicle electronic tag, etc

REFERENCES ANALYSIS (**FLOW**) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Parking Facili"

Vehicle Communications

DEFINITION This includes all real-world communication messages that the vehicle purposely transmitted to the surveillance system. The messages may include elements of the "Vehicle Parameters" or other attributes such as vehicle priority.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Vehicle Dimension

DEFINITION: An element of "Vehicle Observable Parameters."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Vehicle Dimension Violation Data Report

COMPOSITION: Acquired Vehicle Dimension + Acquired Vehicle Travel Direction + Acquired Vehicle ID + Acquired Vehicle Location

DEFINITION: This data is used to determine if a vehicle has violated any dimension laws.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Vehicle ID

DEFINITION: Vehicle ID may include visual features (e.g., license plate number) or electronic signals (e.g., RF tags). It is an element of "Vehicle Observable Parameters."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Location of Sel"

Vehicle Location

DEFINITION: This is the real-world location of the vehicle that the surveillance system has to recognize and map into some geographic reference for use. It is an element of "Vehicle Observable Parameters."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

Vehicle Location and Tracking Data

COMPOSITION: Transit Veh Loc and Tracking Data + Emerg Response Veh Loc and Tracking Data + Maint Veh Loc and Tracking Data + HAZMAT Carrier Location and Track Data

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

Vehicle Observable Parameters

COMPOSITION: Vehicle Dimension + Vehicle Weight + Vehicle Speed + Vehicle Travel Direction + Vehicle ID + Vehicle Occupancy + Vehicle Location + Vehicle Pollution Emissions + Vehicle Safety Status

DEFINITION These are the real-world attributes of a vehicle that shall be acquired by the surveillance system

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Traffic Condit"

ANALYSIS (FLOW) "SRT.DFD" "Acquire Traffic Data"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Vehicle Occupancy

COMPOSITION:

DEFINITION: An element of "Vehicle Observable Parameters."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

Vehicle Pollution Emissions

COMPOSITION:

DEFINITION: An element of "Vehicle Observable Parameters."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

Vehicle Safety Status

COMPOSITION:

DEFINITION: An element of "Vehicle Observable Parameters."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

Vehicle Speed

DEFINITION: An element of "Vehicle Observable Parameters."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

Vehicle Travel Direction

DEFINITION: An element of "Vehicle Observable Parameters."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

Vehicle Weight

COMPOSITION:

DEFINITION: An element of "Vehicle Observable Parameters."

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Acquire Individual Veh"

Vehicle Weight Violation Data Report

COMPOSITION: Acquired Vehicle Weight + Acquired Vehicle Travel Direction + Acquired Vehicle ID + Acquired Vehicle Location

DEFINITION: This data is used to determine if a vehicle has violated any weight laws.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Transportatio"

Verified Road Hazard Detection

COMPOSITION:

DEFINITION: This includes all verified information for each road hazard detected, such as the location, type of debris, and the time discovered.

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Verify Road Hazard Detection

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (PROCESS) "SRT.DFD" "Monitor Road Hazards"

Weather Conditions

COMPOSITION:

DEFINITION: Includes the real-world air temperature, humidity, precipitation, pollution, etc

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

ANALYSIS (FLOW) "SRT.DFD" "Surveillance System"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Environmental"

ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"

Weather Effects

COMPOSITION:

DEFINITION

REFERENCES ANALYSIS (FLOW) "SRT.DFD" "Monitor Road Hazards"